WE CLAIM:

1. An isolated nucleic acid molecule comprising any of SEQ ID NOs: 1, 4-5, 7, 9, 11 or 13, or a fragment thereof.

2. An isolated nucleic acid molecule substantially homologous to any of SEQ ID NOs: 1, 4-5, 7, 9, 11 or 13.

3. An isolated nucleic acid molecule, the complement sequence of which hybridize under stringent conditions to any of SEQ ID NOs: 1, 4-5, 7, 9, 11 and 13.

4. An isolated nucleic acid molecule comprising an antisense sequence of any of SEQ ID NOs: 1, 4-5, 7, 9, 11 and 13.

5. An expression vector comprising any of the isolated nucleic acid molecules of claims 1-4.

6. A cell, transformed with the expression vector of claim 5.

7. A method of producing an OGFr protein or a fragment thereof, comprising transforming a host cell with an expression vector, wherein said expression vector encodes said OGFr protein or a fragment thereof, expressing said OGFr protein or said fragment thereof in the cell and recovering said protein or said fragment thereof.

8. The method of claim 7, wherein said OGFr is encoded by any of SEQ ID NOs: 1, 4-5, 7, 9, 11 or 13.

9. An isolated protein consisting any of SEQ ID NOs: 2, 6, 8, 10, 12 and 14.

10. The isolated protein of claim 9, wherein said protein is made recombinantly.

11. A functional derivative of any of SEQ ID NO: 2, 6, 8, 10, 12 and 14.

12. An antibody directed against an OGFr protein consisting of any of SEQ ID NOs: 2, 6, 8, 10, 12 and 14.

13. The antibody of claim 10, wherein said antibody is a monoclonal antibody.

14. A pharmaceutical composition comprising the isolated nucleic acid molecule of claim 1 and a pharmaceutically acceptable carrier.

15. A pharmaceutical composition comprising the isolated nucleic acid molecule of claim 4 and a pharmaceutically acceptable carrier.

16. A pharmaceutical composition comprising the expression vector of claim 5 and a pharmaceutically acceptable carrier.

17. A pharmaceutical composition comprising the cell of claim 6 and a pharmaceutically acceptable carrier.

18. A pharmaceutical composition comprising the isolated protein of claim 9 and a pharmaceutically acceptable carrier.

19. A pharmaceutical composition comprising the functional derivative of claim 11 and a pharmaceutically acceptable carrier.

20. A pharmaceutical composition comprising the antibody of claim 12 and a pharmaceutically acceptable carrier.

21. A method of detecting the expression of an OGF receptor in a tissue of a subject, comprising contacting a sample of said tissue with a nucleic acid sequence encoding said OGFr or a portion thereof and determining the level of the mRNA encoding said OGFr.

22. A method of detecting the level of an OGF receptor in a tissue of a subject, comprising contacting a sample of said tissue with an antibody specific for said OGFr, detecting and quantitating the complexes formed between said OGFr and said antibody.

23. A method of inhibiting growth of cells *in vitro* comprising introducing to said cells an effective amount of nucleic acid molecules coding for an OGFr or a functional derivative thereof.

24. A method of promoting growth of cells *in vitro* comprising introducing to said cells an effective amount of an OGFr antisense molecule.

25. A method of promoting growth of cells *in vitro* comprising introducing to said cells an effective amount of an antibody directed against an OGFr expressed in such cells.

26. A method of treating cancer in a patient comprising enhancing the function of the OGF ligand-receptor system in the cancerous cells of said patient.

27. A method of treating cancer in a patient comprising administering to said patient, an effective amount of a nucleic acid molecule coding for an OGFr or a functional derivative thereof.

28. The method of claim 27, wherein said cancer is selected from the group consisting of a cancer of neural tissues, prostate cancer, breast cancer, head and neck cancer, and gastrointestinal cancer.

29. The method of claim 28, wherein said gastrointestinal cancer is selected from the group consisting of a pharyngeal, esophageal, stomach, small and large intestine, liver, rectal, colon, pancreatic, biliary tract cancer.

30. The method of claim 27, wherein said cancer is characterized by a deficiency of OGF receptors.

31. The method of claim 27, further comprising administering OGF to said subject.

32. A method of treating a subject with a cancer characterized by a deficiency of OGF receptors, comprising determining the deficiency of OGF receptors on the cancerous cells in said subject, and administering to the subject an effective amount of a nucleic acid molecule coding for an OGFr or a functional derivative thereof.

33. The method of claim 33, further comprising adminisitering OGF to said subject.

34. A method of promoting growth of cells in a subject in need thereof comprising interfering with the function of the OGF ligand-receptor system in said subject.

35. The method of claim 34, wherein said subject suffers a tissue wound.

36. The method of claim 34, comprising administering to said subject, an effective amount of an OGFr antisense molecule.

37. The method of claim 34, comprising administering to said subject, an effective amount of an antibody against an OGFr.

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